In the Claims

The following Listing of Claims replaces all prior versions in the application:

LISTING OF CLAIMS

1. (Previously Presented) A method for analyzing a liquid sample by injecting the latter in a reaction loop coupled with illumination means and detection means, said method comprising the following steps:

- filing a reaction loop with a minimum volume of the sample to be analyzed, through a first input of a T-shaped branch and its output, this reaction loop forming a transparent pipe with a length between about 0.5 cm and about 10 cm, with which detection means are coupled,
- injecting at least one fixed volume of at least one reagent into the reaction loop via a second input of the T-shaped branch in using a push-syringe actuated at a flow rate of about 10 to about 1,000 $\mu L\ min^{-1}$,
- illuminating the transparent pipe,
- detecting filtered light by the detection means,
- recording levels of light transmitted through said transparent pipe after filtering,
- discharging the reagents located in the reaction loop.

2. (Original) The method according to claim 1, wherein a concentration gradient is detected in the reaction loop.

3. (Original) The method according to claim 1, wherein the reaction loop is a transparent capillary or a microfluidic channel.

4. (Original) The method according to claim 1, wherein the discharge of the reagents located in the reaction loop is performed by means of the remaining sample.

5. (Original) The method according to claim 1, wherein the discharge of the reagents located in the reaction loop is performed by means of the next sample.

6. (Original) The method according to claim 1, wherein the sample flux is not interrupted, which allows continuous analysis.

7. (Original) The method according to claim 1, wherein fixed volumes of reagents are successively injected during predefined time intervals.

8. (Previously Presented) The method according to claim 7, wherein a series of pulses of reagents is produced at flow rates of the order to 10 to 1,000 $\mu L\ min^{-1}$ followed by a waiting time.

9. (Previously Presented) The method according to claim 1, wherein linear detection is performed along the reaction loop so that it is possible to obtain a space and time plot of the reactions in the set, reaction loop and detection means.

10. (Previously Presented) The method according to claim 1, wherein a point detection is achieved in a location of the reaction loop so that it is possible to obtain a time plot of the reactions in a location of the set: reaction loop and detection means.

11. (Previously Presented) The method according to claim 10, wherein a point sensor is used, and wherein the point sensor is configured to be movable along the reaction loop.

12. (Previously Presented) A system for analyzing a liquid sample comprising a reaction loop between the sample introduced through an inlet linked to a first input of a T-shaped branch and at least one reagent, and detection means, wherein the reaction loop consists of a transparent pipe, and said system comprises a push-syringe linked to a second input of the T-shaped branch, the outlet of which is connected to the transparent pipe with a length between about 0.5 cm and about 10 cm allowing doses of said at least one reagent to be delivered into this loop, and illumination means with which this transparent pipe may be illuminated so that the detection means record levels of light transmitted through said loop after filtering.

13. (Original) The system according to claim 12, wherein the transparent pipe is a transparent capillary or a microfluidic channel.

14. (Original) The system according to claim 12, wherein the detection means comprise a diode array.

15. (Original) The system according to claim 12, wherein the detection means comprise two optical fibers positioned on either side of the reaction loop.

16. (Original) The system according to claim 12, comprising a peristaltic pump allowing introduction of the sample.

17. (Original) The system according to claim 12, comprising a microvalve positioned upstream from the point of introduction of the sample into the reaction loop.

18. (Canceled)